

Cell Physiology Sourcebook

Fourth Edition

Essentials of Membrane Biophysics

Edited by Nicholas Sperelakis

Now in its fourth edition, the Cell Physiology Sourcebook provides comprehensive and authoritative information on cell physiology and membrane biophysics. It is intended primarily as a textbook for advanced undergraduate and graduate students and as a reference for researchers. This multidisciplinary publication offers a strong foundation which will be an invaluable aid to scientists, researchers and students interested in cell physiology, membrane biophysics, electrophysiology, and cell signaling. This book admirably complements the classical medical physiology textbooks, establishing itself as a leading textbook in the field.

Key Features

- Authored by leading researchers in the field
- Clear, concise, and comprehensive coverage of all aspects of cellular physiology, from fundamental concepts to more advanced topics
- Full color illustrations

Major Topics covered include:

- Physical chemistry of proteins
- Molecular structure and properties of membranes
- Membrane receptors and second messengers
- Active transport of ions and non-electrolytes
- Structure and operation of ion channels
- Membrane excitability and propagation
- Ion channels as targets for toxins, drugs, and diseases
- Sensory transduction mechanisms
- Synaptic transmission
- Photosynthesis and bioluminescence
- Physiology of protozoa and bacteria

Praise for the previous editions

The Cell Physiology Sourcebook was on the American Library Association's CHOICE list of Outstanding Academic Books in 1996 (1st ed) and in 1998 (2nd ed).

"The authoritative volume in the field of cell physiology, and certainly one of the most current sources of comprehensive information available." – CHOICE

"...a core textbook in cell physiology... The need for such a book is well justified, and it fulfills its objectives admirably. It is especially strong on the subjects of signal transduction, membrane biology, ion channels, and neuronal and muscle cell physiology... It is a solid textbook in its field..." – DOODY'S PUBLISHING REVIEWS

"Cell Physiology Source Book 2e will be useful for advanced undergraduate and graduate students studying cell physiology, cell biophysics, electrophysiology, and biological scientists in many fields. The book is particularly suitable for introducing cell physiology to students with training in the physical sciences and for introducing cell biophysics to students with backgrounds in biology." – BIOPHYSICAL JOURNAL



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